Several commenters argue that, regardless of whether CLECs' ability to offer service would be impaired without access to unbundled network elements, the Commission should reject broader unbundling rules because they discourage investment and innovation by both CLECs and ILECs. See, e.g., Bell Atlantic at 10-12; BellSouth at 26-27; USTA at 9-10, 21-22. As a threshold matter, the fundamental purpose of the Act to facilitate and accelerate local competition means that, at the very least, a heavy burden of justification should be placed on the proponent of an argument that access to unbundled elements should be denied even though it impairs the ability of CLECs to compete. The ILECs offer nothing more than unsupported speculation about effects on investment incentives, and in fact, the unbundling approach proposed by CLECs and most state commissions would not discourage either CLEC or ILEC investment.

First, CLECs will always have a strong incentive to self-provision network elements whenever it is efficient to do so, notwithstanding the availability of unbundled network elements from the ILECs at TELRIC rates. See, e.g., MCI WorldCom at 8-9, 26-27; AT&T at 11; CompTel at 12; Sprint at 16-19. See also Kwoka Reply Decl. ¶¶ 8-9, Tab 10. This is because, in order to maximize their ability to compete with the ILECs, and to minimize the ability of the ILECs to interfere with that competition, CLECs will seek to avoid reliance for inputs on their dominant competitors. See, e.g., Kwoka Reply Decl. ¶¶ 8-9, Tab 10.

The ILECs' contention that unbundling of the elements included in the original Rule 319 would deter CLEC investment is flatly contradicted by the ILECs' own insistence that CLECs have aggressively deployed facilities in parts of urban areas throughout the United States while Rule 319 and a liberal impairment standard were in effect. No observer can help but be impressed by the rapid and huge capital investments CLECs have made in the short time they

have been allowed to offer local service. None of this is surprising given CLECs' overriding incentive to avoid reliance on their dominant competitors wherever feasible.[11/] The fact that this investment has occurred during a time when an impairment standard more liberal than the revised one the Commission will adopt in this proceeding demonstrates a fortiori that the standard proposed here by CLECs and most state commissions will not discourage CLEC investment.[12/]

Second, ILECs' incentives to invest in their networks will not be undermined by mandatory unbundling rules. As explained in the Declaration of Ken Baseman, Rick Warren-

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11/ The ILECs themselves well understand the powerful incentives supporting self-provisioning. In the SBC-Ameritech merger application SBC described its incentive and intent to self-provision wherever possible, and to rely on ILEC UNEs only when self-provisioning is not feasible:

> The new SBC will rely heavily on its own facilities in entering these new markets. It will use a "smart build" strategy by which it will construct the facilities that are most needed, combine them with unbundled elements purchased from the incumbent LEC and, where appropriate, transport networks owned by third parties. [In the Matter of Applications for Consent to the Transfer of Control of Licenses and Section 214 Authorizations from Ameritech Corporation, Transferor, to SBC Communications Inc., Transferee, Description of the Transaction, Public Interest Showing and Related Demonstrations, CC Docket No. 98-141, at 15 (filed July 24, 1998) ("SBC-AIT Appl.")]

SBC went on to explain that for a national carrier, there is still another incentive to deploy its own facilities:

> These customers seek the same services, features, functions and capabilities for all of their locations, which can only be provided by a company that has facilities-based capabilities across the United States and, in many cases, around the world. [Affidavit of James S. Kahan, paragraph 30, attached to SBC-AIT Appl.]

12/ CLECs' investment track record shows that entrants are wisely following market dictates and focusing their investment resources (1) where traffic is sufficiently dense to allow the entrants to exploit scale economies, and (2) on pure facilities-based solutions that allow them to avoid dependence on ILECs and diseconomies of connectivity. But the existence of these alternatives does not in and of itself show that they can be efficiently connected by CLECs to provide local services, and ongoing CLEC provision of local services would be impaired if access to ILEC UNEs were restricted.

Boulton, and Susan Woodward, ILECs faced with competition from CLECs using UNEs will respond to that competition by continuing to invest and innovate. See Baseman/Warren-Boulton/Woodward Decl. ¶ 16, Tab 12. They will do so simply because they are better off investing than permitting their networks to deteriorate or to fall behind technologically. In other words, an ILEC will seek to preserve the value of its asset base so as to survive in the new, competitive world. If an ILEC does not maintain and upgrade its facilities, it risks having the CLECs build their own facilities and win over the ILEC's customers. See id. ¶¶ 16, 26. The fact that the CLECs as well as the ILEC will benefit from ILEC investment does not alter this conclusion: while ILEC investment and innovation improve the absolute position of both the ILEC and the CLECs in terms of the quality of service they can provide, the relative positions of the ILEC and CLECs will remain unaffected. See id. ¶ 18. Thus, mandatory unbundling rules will not encourage, not discourage, ILEC investment in their networks.

For these reasons, BellSouth fails in its argument that the Commission could properly deny access, despite a finding that denial impairs the ability of CLECs to compete, because unbundling imposes unacceptable "social costs" in terms of reduced ILEC investment in innovative technologies. See BellSouth at 26-27. Any party that contends that access should be denied even though it impairs the ability of CLECs to compete should bear a very heavy burden under a statute designed to facilitate and accelerate local competition. BellSouth wholly fails to carry that burden. Nor is there any merit in BellSouth's proposal that the Commission should require CLECs to provide specific evidence, because only ILECs have access to that information the burden to provide evidence of the effect of unbundling on ILEC investment incentives should not be on CLECs, as BellSouth proposes, but on ILECs, because only ILECs have access to that information. More fundamentally, a very heavy burden of justification should be on the

proponent of an argument under a statute designed to facilitate and accelerate local competition that access should be denied even though it impairs the ability to CLECS to compete.

Although of course it is true that the statute does not by its terms preclude the Commission from denying access based on factors other than "impairment," in substance BellSouth's argument is entirely without merit. Few of the elements to which CLECs would now like access represent innovative technologies developed by the ILECs. Equally to the point, Bell South does not provide an example of any such innovative technology whose implementation or development could plausibly be deterred by a leasing requirement. BellSouth proposes that the Commission should require CLECs to provide specific evidence of what any unbundling requirement would do to any particular ILEC's investment incentive before it orders any unbundling. But that is of course the purpose of this very proceeding, and BellSouth itself provides no evidence whatsoever that any of its investments would have been in the least affected had it acknowledged an obligation to lease network elements. As MCI WorldCom demonstrated in its initial comments, MCI WorldCom at 9, and in the initial declaration of John E. Kwoka, Jr., "Kwoka Initial Decl." ¶ 25, leasing will not affect ILEC investment in innovative technologies because they make little such investment in the first place, and get a risk-adjusted return for leasing that fully accounts for whatever investment risk they do take. The broad claim that the "social costs" of leasing outweigh the benefits of rapid competition that could be brought about through leasing is one that Congress has already rejected through the enactment of section 251. Although as a theoretical matter there may be an additional factor that is so extraordinary that it counsels against leasing an element even though CLECs are impaired without the element, no commenter has suggested what such a factor could be or why the harm it

would cause would be so great as to require that CLECs be deprived of facilities that impair their ability to compete.

VI. DEFINITIONS

A. IMPAIR

1. Application of Section 251(d)(2)

As the Commission previously stated, the focus of section 251 is to "provide an efficient competitor with a meaningful opportunity to compete." First Report and Order, In re Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, 11 F.C.C.R. 15499, ¶ 315 (1996) ("Local Competition Order"). "Meaningful opportunity" includes the opportunity to employ UNEs when denial of access would materially delay, raise the costs, or reduce the quality or novelty of service to any customer in any area.

Several commenters have indicated that the "necessary" and "impair" determinations should be based on the effect on a "reasonably efficient CLEC." See, e.g., BellSouth at 20-22, SBC at 5, 7; U S West at 11; Ameritech at 5, 36. MCI WorldCom agrees that the statute is not designed to sustain an inefficient would-be market entrant, and that it is appropriate to consider whether the ability of a "reasonably efficient" competitor to compete effectively would be impaired if denied access.

But although the statute is not aimed at assisting nonviable competitors, neither is it calibrated to the performance of the company in a given market whose business plan allows it to furthest reduce reliance on ILEC elements. The Commission must examine the whole of record evidence for this proceeding to establish national judgments about what network elements

reasonably efficient competitors may require.[13/] It should not adopt the proposition, see Hausman and Sidak Aff. ¶ 134 (attachment to USTA); Bell Atlantic at 20, that the existence of a single CLEC using a non-ILEC network element in a specific market be taken as conclusive proof that a reasonably efficient CLEC need not have unbundled access to that element in order to compete. The abilities of the reasonably efficient competitor should not be derived from the isolated action one market participant, whose business plan and circumstances may differ significantly from those of other CLECs.

2. The essential facilities doctrine does not govern application of section 251(d)(2)

MCI WorldCom's initial comments showed it inappropriate for the Commission to rely on the antitrust "essential facilities" doctrine to determine the network elements that must be unbundled pursuant to section 251(d)(2).[14/]

The ILECs concede that the full force of the essential facilities doctrine does not apply. GTE at 16 n.9; U S West at 6. Instead, they argue that the doctrine applies only by analogy. Strikingly, several ILECs argue that the Commission ought to apply a stricter standard than the most demanding version of the essential facilities doctrine. See Hausman and Sidak Aff. ¶ 22 (attachment to USTA). The ILECs' position is unjustified. See generally Kwoka Reply Decl. ¶ 30.

13/ The record established by individual CLECs in this proceeding demonstrate that under current market conditions, each would be impaired by the failure to unbundle. In light of this evidence, and to avoid the anticompetitive administrative costs and possible discriminatory consequences of issuing individual rulings for different carriers, the Commission may apply its expertise to generalize from the record evidence a rule of general applicability to all carriers, nationwide. Such a rule will fulfill the Commission's obligation to devise a sensible regulation that can be applied with the least amount of regulatory involvement and risk of litigation.

14/ See MCI WorldCom at 28-37.

The ILECs seek to create the impression that the essential facilities doctrine is a regulatory test having the same purposes as the Act.[15/] Though both the Act and the antitrust laws enhance consumer welfare by attempting to correct market problems, the purposes of the essential facilities doctrine are much more limited than those of the Act. See Kwoka Reply Decl. ¶¶ 21-37, Tab 10 (quoting Areeda "An essential facility must be more than an input for which the monopolist enjoys a cost advantage, lest we turn every dominant firm enjoying scale economies into a public utility.").

Nor do the ILECs rebut MCI WorldCom's showing that section 251(d)(2) does not incorporate the essential facilities doctrine because Congress chose to employ two standards -- the "necessary" and "impair" standards -- that are more lenient than the "essential" standard.[16/] The ILECs concede that the essential facilities doctrine and section 251(d)(2) are "differently stated."[17/] Nevertheless, they brush aside the Act's specific language, apparently hoping that the Commission will do the same. In particular, some ILECs attempt to conflate the "necessary" and "impair" standards to imply that section 251(d)(2) has only one standard, not two.[18/] That trick is

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15/ See e.g., Ameritech at 30-31 & n.78. Ameritech cites to a student's law review note, Elizabeth A. Nowicki, Competition in the Local Telecommunications Market: Legislate or Litigate?, 9 Harv. J. Law & Tech. 353 (1996). But that article actually undermines the ILECs' position. Ms. Nowicki recognizes that the Act imposes a different standard than the antitrust laws where she argues that "Congress would have been wiser to subject local exchange carriers to antitrust laws, rather than the Act." Id. at 363. MCI WorldCom disagrees with Ms. Nowicki's arguments about the effects of the Act on competition, but concurs that the Act's cooperation requirements are broader than those imposed by the antitrust laws. Congress intended that CLECs have remedies under both the Act and the antitrust laws, precisely because the remedies under each are different.

16/ See e.g., MCI WorldCom at 30-32.

17/ E.g. U S West at 6.

18/ See e.g., Ameritech at 29.

necessary for the ILECs to argue that the Act's language is consistent with an essential facilities standard. But, as we showed in our earlier comments, "necessary" is more lenient than "essential"; and "impair" is more lenient than "necessary."[19/] With Congress having chosen two standards that are less strict than "essential," it cannot be fairly argued -- as the ILECs try -- that essential, necessary, and impair all effectively mean the same thing.[20/]

Lacking support for an essential facilities standard in the language of the Act, the ILECs argue that Congress must have adopted a limited essential facilities standard because Congressional reports have recognized that the ILECs have control over, and the CLECs need to access to, "essential facilities."[21/] But the issue is not whether the ILECs control certain "bottleneck" facilities that are essential to the existence of competition (although they do). Instead, the issue is whether the CLECs' UNE rights are limited to network elements that are essential to the survival of competition. CLEC UNE rights are not so limited. As MCI WorldCom's initial comments demonstrated, Congress was aware of the essential facilities

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19/ MCI WorldCom at 30-31; accord AT&T at 48-49.

20/ GTE argues that "necessary" and "impair" should be read in their "judicially settled meaning." Then, GTE says they should be interpreted in the "legal context" of the essential facilities doctrine. GTE at 14-15. However, the antitrust laws augment the Act; they do not duplicate it. Congress expressly included an antitrust savings clause. MCI WorldCom at 35-36. Even if Congress did intend the Act to be interpreted in the "legal context" of contemporary antitrust law, GTE is wrong in asserting that the "essential facilities" doctrine is "the only relevant line of authority . . . under which an incumbent firm can be compelled to share its facilities with competitors." GTE at 15. The Supreme Court has expressly endorsed other theories that compel sharing. E.g., Eastman Kodak Co. v. Image Technical Servs., Inc., 504 U.S. 451, 483 n.32 (1992); Aspen Skiing Co. v. Aspen Highlands Skiing Corp., 472 U.S. 585, 601, 611 n.44 (1985).

21/ See e.g., Ameritech at 30-32; GTE at 15.

doctrine, previously used the "essential facilities" term in other proposed legislation, and chose not to incorporate that term in the Act.[22/]

The ILECs argue that the Supreme Court's decision in Iowa Utilities Board "embraced" the fundamental precepts of the essential facilities doctrine.[23/] But the Supreme Court expressly stated that it was not deciding whether the Commission should apply the essential facilities standard; and specified that "it may be that some other standard would provide an equivalent or better criterion for the limitation up on network-element availability that the statute has in mind." Iowa Utils. Bd., 119 S. Ct. at 734-35. The majority's discussion required only that the Commission adopt "some limiting standard, rationally related to the goals of the Act."[24/] Iowa Utils. Bd., 119 S. Ct. at 734-735.

The ILECs assert that the essential facilities doctrine is the only way to encourage facilities-based competition[25/] and that any other interpretation of section 251(d)(2) would impose greater costs than benefits.[26/] However, as MCI WorldCom explained in its initial Comments, there is no reason to believe that application of the essential facilities doctrine will

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22/ MCI WorldCom at 35-36.

23/ E.g. Ameritech at 29-30.

24/ Ameritech represents that the Supreme Court suggested "that an increase in cost or decrease in quality warrants unbundling only when the entrant cannot compete without access to the incumbent's facilities." Ameritech at 30 (emphasis added). To the contrary, nowhere did the Court's opinion "suggest" that the term "impaired" means "cannot compete." At issue in the Court's opinion was whether a firm was "impaired" if it "receives a handsome profit but is denied an even handsomer one." Iowa Utils. Bd., 119 S. Ct. at 735 & n.11.

25/ E.g. GTE at 16-20; Kahn Aff. ¶ 6 (attachment to Bell Atlantic).

26/ E.g. Ameritech at 28; U S West at 6-7.

encourage more facilities-build outs than some other "limiting standard."[27/] Both CLECs and ILECs will invest more, not less, with less restrictive unbundling requirements, and CLECs will retain strong incentives to minimize use of ILEC elements.[28/]

For the foregoing reasons, and for the reasons stated in MCI WorldCom's initial comments, the Commission should not rely on the essential facilities doctrine to interpret section 251(d)(2).

B. NECESSARY AND PROPRIETARY

As MCI WorldCom explained in its opening comments, the "necessary" component of § 251(d)(2)'s unbundling requirements applies only to network elements that are "proprietary" in nature. See MCI WorldCom at 20. The Commission's definition of the term "proprietary" in the Local Competition Order was appropriately narrow, and the ILECs have not for the most part suggested in the numerous section 252 district court cases across the country that any of the network elements on the Commission's initial unbundling list are proprietary. Nor has any ILEC ever challenged the Commission's "proprietary" definition before either the Eighth Circuit or the Supreme Court. Id. at 21.

The Commission need not revisit the proprietary issue where no controversy has previously existed, and it should therefore reject any of the ILECs' attempts to expand the coverage of § 251(d)(2)'s "necessary" requirement. For example, contrary to the suggestion of some ILECs, see e.g., Ameritech at 44, the Commission should not disturb its initial determination that the "necessary" standard is not implicated when a requesting carrier can gain

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27/ MCI WorldCom at 26-27, 34-35; Kwoka Initial Decl." ¶¶ 24-25. Indeed, the essential facilities standard would create additional barriers to entry and thus further impede competition. See Kwoka Reply Decl. ¶¶ 21-38, Tab 10.

28/ Kwoka Initial Decl. ¶ 25.

access to the features or functions of a potentially proprietary element without gaining access to the proprietary information itself. See MCI WorldCom at 21 (citing Local Competition Order ¶¶ 284, 481 n.1120, 498). Similarly, there is simply no reason to believe that the term "proprietary" covers elements that are claimed to be proprietary to third party vendors (rather than to the ILEC). See MCI WorldCom at 22.

As noted in MCI WorldCom's initial comments, although the "necessary" standard required for CLEC access to proprietary elements is higher than the "impairment" standard for non-proprietary elements, the difference is one of degree, not kind. Id. at 19. Neither the statutory context of the necessary standard, the purposes of the Act, nor the judicial interpretations of the term "necessary" supports the ILECs' overly restrictive reading of that term. Id. at 18-20. The Commission should adopt MCI WorldCom's proposed definition of the "necessary" standard. Id. at 18-19.

VII. INDIVIDUAL ELEMENTS

A. Introduction

The most important public policy issue facing the Commission in this proceeding is how CLECs may access unbundled ILEC loops in a way that does not impair their ability to provide the services they seek to offer in competition with the ILECs. Even under their overly restrictive definitions of impairment, several ILECs acknowledge that CLECs should have unbundled access to the loop in most circumstances.[29/] The ILECs, however, would effectively deny the access that they purport to concede by prohibiting CLECs access to related elements that CLECs

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29/ See Ameritech at 6; BellSouth at 70, 74-75; SBC at 23; U S West at 38. The unreasonable limitations that some ILECs would place on access to unbundled loops are addressed below.

need to use in combination with the ILEC loops in order to use these loops efficiently and cost-effectively

The ILECs' key arguments in their attempt to minimize access to unbundled ILEC network elements that CLECs need to make effective use of unbundled loops can be easily summarized. First, the ILECs argue that each related network element must be analyzed on a stand-alone basis to determine if lack of CLEC access to that element would impair the CLEC's ability to provide local services.[30/] Second, based on this myopic view of the impairment inquiry, the ILECs contends that lack of access to most elements will not impair CLECs' ability to compete because these elements are available on a stand-alone basis from alternative sources (both self-provisioned by CLECs and owned by third parties) either currently or at some indeterminate time in the future.[31/] Indeed, the ILECs argue that the existence of even a single alternative to an ILEC element demonstrates lack of impairment from denial of unbundled access.[32/] In other words, the ILECs would have the commission assume that duopoly — or more correctly, by potential duopoly, because the ILECs would not require that the single alternative could actually be used to provide local service -- ensures that CLECs would have the same efficient access to critical elements at cost-based rates that Section 251(c)(3) ensures.[33/]

The ILEC's proposed approach would deny access to elements that CLECs need to be able to compete. In particular, CLECs need an efficient means to connect their networks to unbundled ILEC loops, and the ILECs fail to consider whether elements from alternate sources

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30/ See, e.g., Bell Atlantic at 16-17; U S West at 22; USTA at 44; BellSouth at 81; SBC at 9.

31/ See generally Huber & Leo Report.

32/ GTE at 8, 32-39; Bell Atlantic at 13; USTA at 29-30; U S West at 12.

33/ We previously rebutted the ILEC contention that CLEC access to unbundled ILEC network elements at rates set at TELRIC creates a strong disincentive for CLECs to self-provision any network elements.

practically can be connected to unbundled loops to provide local services. That a CLEC may not need access to an element on a stand-alone basis does not mean that denial of access would not impair its ability to compete where it need access to other ILEC UNEs. As explained below, the ILECs are wrong both as a matter of fact and a matter of law that no impairment will occur if CLECs are denied access to an element that they use in combination with another but to which they do not need access on a stand-alone basis.

Elements must connect to one another to provide service. If a provider can connect those elements efficiently, it will be able to offer local service efficiently and to be an effective competitor in the market. If a provider cannot connect those elements efficiently, then even if it has access to those elements, it is unlikely to be able to offer local service efficiently and to provide effective competition. The public switched telephone network is characterized by significant economies of connectivity.[34/] As the ILECs' own economists acknowledge, the issue is whether there is a "practical alternative source" to ILEC elements. Aron & Harris, Ameritech 14 (emphasis added).

The mere existence of stand-alone alternatives to some ILEC elements in some geographic areas does not mean that these alternatives are practically available to CLECs for the actual provision of local services using unbundled ILEC loops. The ILECs constructed their networks for a monopoly environment, without any concern for how to allow multiple providers to connect efficiently non-ILEC elements that potentially could be provided competitively, such as switching, to ILEC elements that remain natural monopolies, such as ILEC loops. Although, for example, CLECs may be able to provide switching in a local market, they may not be able to collocate equipment at each ILEC end office so that they can feasibly provide local service to

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34/ See MCI WorldCom at 38-39.

each customer served by each end office. Or for those end offices where collocation space is available, the cost of collocation may be prohibitive and the time needed to establish collocation may substantially delay the advent of competition. Additionally, as the neutral third-party tester in New York has recently found, ILECs simply do not have the systems in place to provide loops to connect to CLEC switches even where collocations are up and running. MCI WorldCom has on more than one occasion sought to use its own switching in conjunction with Bell Atlantic loops but was unable to do so precisely because of the inability of the elements to be connected in a timely and reliable fashion. See Lichtenberg Decl. ¶ 8-12, Tab 11.

The practical realities of the local marketplace therefore cause CLECs to need access to other ILEC elements so that they can effectively use unbundled ILEC loops to provide local service on a competitive basis. Loops remain a bottleneck element, and to the extent they can be efficiently provisioned only in conjunction with ILEC switching elements, then non-ILEC switches cannot provide an alternative to ILEC switches. Although the underlying scale economies associated with switching are sufficient to allow CLECs to deploy their own switches in urban areas, CLECs cannot efficiently connect their switches to unbundled ILEC loops to provide residential and small business local services. CLECs therefore need unbundled access to switching. Moreover, as MCI WorldCom explains in the UNE-specific sections below, where it cannot use its own switches, it also requires use of the ILEC's signaling and call-related databases to complete calls, the ILEC's shared transport to efficiently carry its traffic from the ILEC switch to the party called by its customer, and the ILEC's DA and OS databases and services. MCI WorldCom is committed to deploying and using its own facilities wherever it is feasible to do so, but it has discovered that sometimes even where it has deployed its own

facilities, they cannot practically be used to serve all customers to serve all customers because of impediments to efficiently connecting them to ILEC elements for which there are no alternatives.

Rather than dispute or even confront it, the ILECs essentially ignore this fundamental fact of CLECs. Instead, the ILECs argue that it is simply irrelevant that the additional costs, delays, and quality degradation that CLECs suffer when attempting to connect their elements to ILEC loops impairs CLECs' ability to compete. This argument is wrong as a matter of law. Nothing in language, structure, or purpose of the market-opening provisions of the Act requires the Commission to close its eyes to the market reality and to deny unbundling of multiple elements even though the denial would impair CLECs' ability to compete using unbundled loops. To the contrary, the statutory impairment inquiry permits, and indeed requires, the Commission to consider any way or any circumstances in which denial of access would impair CLECs' ability to compete.

The ILECs should not be heard to complain that this approach allows access to a particular element in some circumstances (when CLECs seek to use the element on a stand-alone basis) but not in others (when CLECs need access in order to utilize other unbundled elements efficiently).[35/] After all, the ILECs themselves relentlessly argue that unbundling should be required only in those specific circumstances where it would promote competition. Consideration of the interrelationship between unbundled elements that CLECs need to use in combination is also consistent with the ILEC's own approach with respect to several UNEs. For example, ILECs agree that CLECs should get access to NIDs used in combination with leased

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35/ Of course, the fact that denial of access does not impair CLECs' ability to compete in one situation - where we use the element on a stand-alone basis - does not mean that denial of access does not cause impairment in another situation - where we use the element in combination with another.

loops, and to unbundled signaling when CLECs have the right to lease switching. U S West at 41. The same considerations should apply in addressing any element that is typically ordered in combination with other ILEC elements.[36/] The ILEC's proposed approach that would address whether or not a CLEC is impaired without access to an element without even considering why the CLEC wants access to the element in the first place lacks legal justification just as it defies common-sense.

Finally, the data the ILECs present concerning deployment of CLEC facilities do not demonstrate that effective alternatives to ILEC elements are available as a practical matter - even if they are considered on a stand-alone basis. While MCI WorldCom agrees with the ILECs that CLECs have aggressively deployed facilities in many areas, this deployment does not enable CLECs to use these facilities to provide prompt and ubiquitous to all classes of customers in all areas without unbundled access to ILEC elements. First, and foremost, the ILECs make no attempt to demonstrate — and in fact deliberately attempt to obfuscate — whether the facilities described in their catalogue of CLEC investments are practically available for use in the efficient provision of local service. Any existing facility is assumed to be usable to provide any service to any customer in any part of a geographic area. Moreover, every potential facility, such as cable plant, is treated as if it currently provides a true alternative, even though it may well be years

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36/ Indeed, the Commission could follow the same approach with respect to other elements as it used with respect to OSS when it ruled that a CLEC is entitled to the OSS associated with an element on two separate grounds - both because OSS is a network element lack of access to which would impair CLECs' ability to compete, and also because OSS is an integral part of nondiscriminatory and reasonable access to other network elements. By the same token, for example, CLECs are entitled to access to ILEC switching both because it is part of what it means to have effective access to the associated ILEC loops and also because it should be unbundled as a network element under the impairment standard.

before the technology supports the use and even longer before all the upgrading is performed to bring existing plant up to that capability.

Second, the ILECs' catalogue refers to areas "served" by each facility, without defining what is meant by "serving." There appears to be an implicit assumption that anytime a facility is located in a particular geographic area it can serve that entire geographic area. This is not a correct assumption for several reasons: (1) the facility may not be technically capable of serving the entire area; (2) the facility may not have the capacity to serve the entire area and it may not be financially viable to expand the capacity to do so; (3) the facility may only be able to serve the entire area if there are substantial investments in complementary elements, but those additional investments may not be justified. For example, a fiber ring that reaches into one corner of a LATA or a serving area (or even of a local exchange area) likely will not be able to serve the vast majority of customers in that area unless considerable additional investment is undertaken.

Third, the notion that only a single alternate source conclusively demonstrates that CLECs have no need for unbundled ILEC elements has no basis in market reality or economics. Duopoly is no substitute for effective competition. See Kwoka Reply Decl. ¶¶ 18-20, Tab 10.

B. Loops and Loop-Related Elements

The comments reflect that lack of practical access to loops remains one of the greatest impediments to competitive provision of local telecommunications services. The ILECs concede that, except for a few large business situations, CLECs have no alternative to the ILEC loops for the provision of voice and advanced services.[37/] But the ILECs would put restrictions on which

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37/ BellSouth claims that access to ILEC loops to provide mass market service is not necessary because cable television and wireless alternatives are effective today, BellSouth at 72-74, but not even her Bell siblings support that claim. See, e.g., Ameritech at 6; SBC at 23; U S West at 38. There is no information available now that will allow regulators or others to predict with any confidence whether and when cable television and wireless will provide viable

components of their loops they would make available to CLECs and on where and how the CLECs could connect their own elements to those loops. These restrictions undermine the ability of the CLECs to offer competitive service. The exceptions proposed by ILECs to their provision of unbundled loops to CLECs would deny CLECs access when no alternatives exist and also would create contentious regulatory battles certain to delay, and substantially increase the cost of, CLEC entry. The comments in this proceeding reinforce that the key public policy issue is not whether CLECs should have access to unbundled ILEC loops, but how they can be assured of practical access to the loop when they are using their own switching (and other elements) to provide service.

The ILEC catalogue of CLEC elements already deployed correctly identifies a number of locations where CLECs are using their fiber rings to reach large business customers directly. See Reply Declaration of John M. Wimmer ("Wimmer Reply Decl.") ¶ 4 (attached hereto as Tab 13). MCI WorldCom builds out its fiber rings to connect as many of its large business customers as possible and extends its rings to add new business customers it has won. Id. But this network expansion of necessity must be on a case-by-case basis as MCI WorldCom (like other CLECs larger and smaller) does not have the financial wherewithal, nor would it be financially viable, to extend its network to the premises of all businesses and residents in a serving wire center area. Id. There may be a few exceptions, but for the vast majority of locations even if MCI WorldCom is self-provisioning loops to a few large business customers within a serving wire center area, it

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alternatives to the ILEC loop, and they clearly do not do so now. The Commission should make such an assessment in periodic reviews of the unbundling requirements.

would not be viable to self-provision loops for all customers (or even all business customers) it wins in that area.[38/] Id.

The ILECs' proposed loop rules fail to take into account the market dynamics that determine where CLECs can viably self-provision loops, and therefore would deny CLECs access needed to provide local telecommunications services. Id. ¶¶ 5-6. Ameritech proposes that CLECs not have access to unbundled loops in wire centers with 40,000 or more lines in which alternative loop facilities have been deployed. Ameritech at 6. In a similar vein, Bell Atlantic would deny CLECs access to high-capacity fiber loops in any area where at least one carrier has deployed its own network and collocated its own transmission equipment in Bell Atlantic's wire centers. Bell Atlantic at 39. There are more than 1,400 ILEC serving wire centers that serve 40,000 or more lines.[39/] More than half of those lines are residential lines. Market forces today do not allow CLECs to deploy ubiquitous networks that extend to the premises of all customers in a geographic area. Wimmer Reply Decl. ¶ 5 (Tab 13). A CLEC may choose to build out its network to a single large business customer, but the incremental cost of extending the network to nearby customers often will far exceed the incremental revenues that would be generated, even if one or more of those additional customers sought high-capacity fiber loops.[40/] Moreover, the fact that a single CLEC has demand sufficient to support loop deployment in a specific area does not mean that other CLECs will have such demand. Id. The inevitable result of Ameritech's

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38/ Even in uniquely dense locations building entry restrictions imposed by landlords regularly require MCI WorldCom to use ILEC loops.

39/ HAI Model, release 5.0, Ex Parte Presentation - Proxy Cost Models, CC Docket No. 96-45, Letter from Richard N. Clarke to Magalie Roman Salas (Dec. 16, 1997) ("HAI model").

40/ Id. Moreover, landlords may block CLEC access at any price, thus requiring access to the ILEC loops to gain access to the building and customer.

proposal were it implemented would be that CLECs would be unable to reach great numbers of customers -- especially residential customers -- whenever a CLEC decides to extend its network to a single business customer in the same wire center. See id. Allowing additional CLECs to enter the market using unbundled ILEC loops gives them the opportunity to gain market penetration and maximizes the likelihood that ultimately there will be more than two facilities-based providers.

SBC, GTE, U S West, and BellSouth's proposals are, if anything, more extreme because they would not require any alternatives to be in place before restricting CLEC access to unbundled loops. SBC would deny CLECs access to unbundled loops serving large customers in dense wire centers with collocated CLECs. SBC at 23, 30. This is a strange basis for an exception. If a CLEC undertook this substantial investment required for collocation, switching and transport, its decision not to extend its network further, to customer premises via loops, is much more likely to demonstrate lack of justification for additional investment than a lack of commitment to self-provisioning. SBC has it backwards -- collocation suggests the need to lease loops, not the absence of need. More generally, the rule does not reflect the dictates of the market. The 1,400 dense wire centers (serving 40,000 or more lines) serve in total 94 million access lines.[41/] Whatever SBC's definition of large business, there surely will be many such businesses located in dense wire centers where a CLEC has collocated that nonetheless do not generate enough traffic to justify CLEC loop buildout. Under the proposed SBC rule, CLECs would be precluded from reaching those business customers. This will not only deny those customers competitive service; it also will artificially restrict CLEC access to revenues needed to continue to expand their networks.

41/ HAI model, 5.0.

GTE would deny CLECs access to unbundled loops used to serve business customers with 20 or more access lines or multiple dwelling unit complexes. GTE at 10. GTE provides no empirical evidence — because there is no evidence — to justify denying CLEC access to loops when a customer uses 20 loops.[42/] The economics of local telecommunications service is far more complex than GTE's simplistic and anticompetitive proposed rule. It is not economically feasible to build loops to thousands of businesses with 20 or more lines. Id. Wimmer Reply Decl. ¶ 6 (Tab 13).

U S West proposes that the Commission adopt a presumption that unbundling is not required for ILEC high-capacity transmission facilities that connect to end user premises and that operate at DS1 or higher transmission levels, placing the burden on the CLEC to rebut the presumption with evidence that unique local conditions prevent deployment of high-capacity facilities to certain customers. US West 38-39 While CLECs are busily deploying their own fiber transmission facilities, there is no way they can do so to every location where a customer seeks a DS1 trunk. Wimmer Reply Decl. ¶ 7. If ILECs had the discretion to deny CLECs access to fiber loops with DS1 capacity, they could play havoc with CLEC business plans and product launches by strategically refusing to provide DS1s in those locations the CLECs are least likely to be able to self-provision. Id.

BellSouth would not unbundle business loops (4-wire and higher) in the denser two of three zones that it proposes. BellSouth at 71-72. But there will be many situations, especially in the second zone, in which CLEC self-provision will not be feasible.

42/ Indeed, none of the ILECs provides any empirical evidence to justify their loop proposals.

That the ILECs cannot even agree among themselves as to how to limit access to loops suggests how arbitrary the many ILEC proposals really are. Rules based on artificial thresholds, such as serving wire centers that serve 40,000 customers, or business customers with 20 or more lines, or a single DS1 line, or a four-wire line, not correspond to need. Real-life deployment decisions are not based only on the size of the customer or of the serving wire center, but also on dynamic market factors such as customer distance from the CLEC's rings, the availability of rights of way, the possibility and costs of gaining building entry, and myriad other factors. Wimmer Reply Decl. ¶ 6 (Tab 13). If the FCC or any state commission tried to capture each of these factors faithfully in a rule, the rule would be so complex as to be entirely unworkable. And if any of the ILEC exceptions were adopted, CLECs would be denied access to loops when such access is needed to be able to offer competitive local service.

Focusing their energy on artificial restrictions for access to the loops, the ILECs largely ignore another critical public policy issue — how CLECs should be able to access unbundled ILEC loops. Where they do address the issue, it is to impose constraints on CLEC access, for example, by placing limits on loop conditioning, GTE at 86-87, or by limiting where CLECs can connect with ILEC loops. See e.g., SBC at 30-31 (access at remote terminals, feeder distribution interfaces, and controlled environments results should not be required). Most of all, the ILECs attempt to impose indirect constraints by proposing that the impairment analysis for each element in a UNE combination be performed on a stand-alone basis. For example, Bell Atlantic argues that the fact that it might be less expensive and more convenient for a CLEC to get a network element from the ILEC in combination with another element does not suffice to put that element on the list of UNEs that ILECs must provide CLECs; the element must meet the

standard considered in isolation, even if it is in fact already combined with another element in an ILEC network. Bell Atlantic at 17.

If a CLEC is restricted in where it can connect with the ILEC loop and in the loop conditioning it can request, it will be extremely difficult, costly, and slow for the CLEC to connect its switches to those ILEC loops. These unnecessary restrictions on the CLEC's ability to use its own switching should not be allowed. If, on top of that, these connection issues cannot be considered when determining whether the CLEC should have access to the ILEC's switching, then there is the additional danger of denying the CLEC access to ILEC switching. The ILECs seek blatantly anticompetitive rules.

The procompetitive approach is to require ILECs to offer on an unbundled basis elements that are needed to access other elements for which there are no practical alternatives. Just as U S West has argued that CLECs should get the NID when they lease unbundled loops, U S West at 41, and other ILECs have argued that CLECs get signaling when they lease switching, Ameritech at 114; SBC at 43, if ILEC switching is needed to gain access to ILEC loops, then unbundled switching must be available whenever a CLEC obtains unbundled loops.[43/]

In MCI WorldCom's comments, it described the various parameters that should be incorporated into Commission rules on access to unbundled loops. These all focused on the importance of incorporating flexibility and functionality into the rules so that CLECs could fully exploit the continuous technological changes reduce the diseconomies of connectivity CLECs now suffer relative to the ILECs when attempting to connect their own switching and other equipment to the ILECs' loops. For example, MCI WorldCom explained that instead of defining

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43/ More generally, the right to get access to element "X" includes the right to get access to elements needed to access element "X" efficiently, just as the Commission has determined that CLECs get access to OSS both as an element and as a means of accessing other elements.

the one end point of the loop as "a distribution frame (or its equivalent), it urges the Commission to define that end point as the "loop access point," and further to explicitly identify a number of such points. See MCI WorldCom at 45-46. This approach will minimize the ability of ILECs to challenge each and every CLEC request for which connection would not be at the main distribution frame. Similarly, we explained that actual loop requests increasingly are couched in terms of loop capability, frequently measured in terms of bandwidth, and thus the rules should explicitly identify bandwidth as an appropriate parameter for CLECs to use when ordering ILEC loops. This has the simultaneous advantage of allowing CLECs to obtain the functionality they need and allowing the ILEC to provide that functionality.[44/]

The level of detail that MCI WorldCom suggests be incorporated into the rules would provide a sufficiently clear test about which loop requests ILECs honor. In real life CLECs must make explicit requests about the capabilities of all elements they order, and identifying the parameters that can be used in ordering provides very useful guidance that should eliminate (though with ILECs' litigious nature, likely will only reduce) the need for case-by-case determinations of whether the ILECs can refuse to honor CLEC orders. Defining loop access points in functional terms does not inject unacceptable uncertainty because it is reasonably administrable. Even the alternative is more subject to uncertainty and delay because it would require continuing and continuous proceedings to update the rule as local networks evolve.

In providing its loop definition in the comments, MCI WorldCom explained that the loop consists of a number of components. Two of those components are the NID and intrabuilding network cable. Although most of the ILECs, in knee-jerk fashion, claim CLECs should not have

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44/ This is not a new concept. For years, the ILECs have provided DS1 functionality using cost-saving HDSL technology.

unbundled access to the NID because the actual equipment is cheap and available off-the-shelf,[45/] it is noteworthy that U S West states that it is operationally efficient to provide loop and NID together, so it would provide the NID where required to provide loop, and the NID should be included in the loop definition. U S West at 41. SBC states the NID should not be unbundled, but it would voluntarily provide it along with the loop. SBC at 33. Although the ILECs tend to be silent on intrabuilding network cable, it clearly would be even more difficult for CLECs to self-provision that loop component than to self-provision NIDs; there is no valid reason for denying CLECs access to intrabuilding network cable. As MCI WorldCom explained in its comments, there will be times when MCI WorldCom and other CLECs are able to self-provision loops from their network to the minimum point of contact at a building or campus on which a customer is located. But CLECs will need access to the intrabuilding network cable to gain access to the customer. As long as CLECs are guaranteed such access, it does not matter if the intrabuilding network cable and NID are identified as loop components or separate elements.

Two loop components define the transmission media that connect the end user to the serving wire center. Wimmer Reply Decl. ¶ 8, n.3 (Tab 13). Today, the dominant medium is a copper loop. Id. About 70% of all customers are connected via unloaded copper pairs. Id. The remaining customers are connected with substandard loaded copper loops or with newer technologies such as digital loop carrier or other multiplex over copper or fiber facilities. Id. As forward-looking technologies are deployed, MCI WorldCom expects about half of all loops will be served wholly or in part over multiplexed copper or fiber facilities. Id. MCI WorldCom urges the Commission to declare the copper-only portion of the loop and the multiplexed facility

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45/ See e.g., SBC at 33; U S West at 40-41; GTE at 56-57.